



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,423	09/24/2003	Rudiger Gorny	PO-7871/LeA 36,198	5077
157	7590	09/06/2005	EXAMINER	
BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SANDERS, KRIELLION ANTIONETTE	
			ART UNIT	PAPER NUMBER
			1714	
DATE MAILED: 09/06/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/669,423

Applicant(s)

GORNY ET AL.

Examiner

Kriellion A. Sanders

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/03, 2/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nodera et al, US Patent No. 5837757 in view of Gunther et al, US Patent No. 4129412 and Martini et al, US Patent No. 4447350.

Nodera et al discloses a flame retardant polycarbonate resin composition comprising (A) a polycarbonate resin and (B) a titanium oxide powder in a ratio by weight of from 70/30 to 90/10, and further containing (C) a compound containing a stilbene-bisbenzoxazole group, in an amount of from 1 to 1000 ppm by weight relative to the total weight of the component (A) and the component (B). The compound containing a stilbene-bisbenzoxazole group functions to increase the light reflectance of the polycarbonate resin composition. The compositions are useful in that they have excellent mechanical properties (especially, impact resistance), electric characteristics and transparency. Patentee indicates that polycarbonate resins are widely used as engineering plastics for making items useful in office automation, appliances, electric and electronic appliances, construction, and for liquid crystal display backlight reflectors that are required to have high reflectance. Patentee indicates that when used in liquid display backlight reflectors, resins are required to have high reflectance as well as high light shieldability and light fastness. Moreover, for televisions, personal computers and other appliances comprising liquid

Art Unit: 1714

crystal displays, the recent tendency is toward slim and thin products. Therefore, materials such as disclosed by Nodera et al, having good moldability and high light reflectance are suitable for the above applications. The flame-retardant polycarbonate resin compositions of the Nodera et al invention may optionally contain other various additives, such as antioxidants, lubricants (mold-releasing agents) and other inorganic fillers, so far as said additives do not interfere with the objects of the present invention. The resin compositions produced are molded into flat sheets or curved sheets through ordinary molding means of, for example, injection molding or compression molding, to obtain light reflectors. The light reflectors are favorably used, for example, in lighting devices or for liquid crystal display backlight. Especially favorably, these are used for liquid crystal display backlight. See col. 1, cline 15 through col. 11, line 65.

Gunther et al. discloses mixtures of optical brighteners containing 0.05 to 1% of a 4-benzoxazolystilbene derivative and 1 to 0.05% of a 1,4-bis-benzoxazolyl- or bis-benzthiazolyl-naphthalene derivative. These mixtures show a higher degree of whiteness than an equal amount of only one of the two components. The optical brighteners may be used for brightening fabric materials. Moreover, the optical brightener mixtures may also be used successfully for the brightening of plastic materials. See col. 1, line 1 through col. 3, line 63.

Martini et al discloses mixtures of optical brighteners consisting of 1 to 60% by weight of a brightener from the bisbenzoxazolynaphthalene series and 99 to 40% by weight of one or more brighteners of the formulae 2 to 10 listed in the description of the invention, wherein the second optical brightener may be a benzotriazole derivative that directly corresponds to that of applicant's claims. The optical brighteners are said to be suitable for brightening textile material of linear polyesters, polyamides and acetylcellulose. However, these mixtures can also

Art Unit: 1714

successfully be used on mixed fabrics comprising linear polyesters and other synthetic or natural fibers, for example fibers containing hydroxyl groups, especially cotton. Patentee at that time did not recognize that the optical brighteners had any application in moldable synthetic resins. See col. 1, line 7 through col. 3, line 28.

Since Gunther recognized that optical brighters which are 4-benzoxazolystilbene derivatives and 1,4-bis-benzoxazolyl- or bis-benzthiazolyl-naphthalene derivatives may also be used successfully for the brightening of plastic materials, and since Nodera et al discloses that conventional optical brighteners containing the stilbene-bisbenzoxazole group are effective additives for formulating flame retardant polycarbonate resin compositions having increased light reflectance, light shieldability and light fastness, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention, to deduce that certain optical brighteners, particularly 4-benzoxazolystilbene derivatives, are effectively used in polycarbonate resin compositions for increasing light reflectance, light shieldability and light fastness. Since Gunther equates the 4-benzoxazolystilbene derivatives and 1,4-bis-benzoxazolyl- or bis-benzthiazolyl-naphthalene derivatives and Martini et al equates the bisbenzoxazolynaphthalene derivatives and the benzotriazole derivatives, it would have been obvious to employ the bisbenzoxazolynaphthalene derivatives and the benzotriazole derivatives of Martini et al into the polycarbonate resin compositions of Nodera et al. with the expectation of achieving improved optical brightness and increased light reflectance, light shieldability and light fastness, since the optical brighteners are equated in the prior art.

Art Unit: 1714

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122.

The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kriellion A. Sanders  
Primary Examiner  
Art Unit 1714

ks